

REMARKS

This is a full and timely response to the final Office action mailed May 2, 2006. Reexamination and reconsideration in view of the foregoing following remarks is respectfully solicited.

Claims 1 and 3-23 remain pending in this application, with Claims 1, 11, 21, and 23 being the independent claims. No claims have been amended herein, and no new matter is believed to have been added.

Rejections Under 35 U.S.C. § 102

Claims 1-5, 10-15, and 21-23 were again rejected under 35 U.S.C. § 102 as allegedly being clearly anticipated by U.S. Patent No. 6,102,337 (Quartararo). This rejection is respectfully traversed.

Independent Claims 1 and 11 each relate to a thrust vector actuation control system including a controller configured to implement a control law, and independent Claim 21 relates to a propulsion vehicle that includes a controller configured to implement a control law. Each of these independent claims recites, *inter alia*, that the controller is adapted to receive updated control law variables and, upon receipt thereof, to modify the implemented control law to include the updated control law variables.

As regards independent Claim 23, this claim relates to a method of operating a thrust vector actuation system that includes the step of determining whether to operate the thrust vector actuation system in at least one of a control mode and a monitor mode, and recites, *inter alia*, providing at least writable access to one or more parameters of a control algorithm if it is determined that the system should operate in the monitor mode, whereby any of the one or more parameters may be updated; and updating the control algorithm to include at least the parameters that were updated.

Quartararo relates to a spacecraft attitude control system that includes a control signal generator that is configured to implement a control law. The Office action cites the discussion in column 4 of Quartararo regarding the operation of the control law as allegedly disclosing the invention encompassed by at least the independent claims. Quartararo, in at least column 4, discloses that the control signal generator (48) receives an error signal (46), and that the control

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law (50) generates torque signals (52) representative of the torque needed to correct the error signal. Thus, Quartararo discloses nothing beyond the function of a conventional control law. However, nowhere does Quartararo disclose (or even remotely suggest) at least the above-noted features of independent Claims 1, 11, 21, and 23. Namely, Quartararo fails to disclose at least modifying a control law or control algorithm upon receipt of updated control law variables or parameters, respectively. Indeed, in the system disclosed by Quartararo, the control law (50) remains the same throughout operation, and is not modified or updated in any manner whatsoever.

In view of the above, Applicants request reconsideration and withdrawal of the § 102 rejection.

Rejections Under 35 U.S.C. § 103

Claims 6-9, and 16-20 stand rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Quartararo in view of U.S. Patent No. 5,100,082 (Archung). This rejection is respectfully traversed.

Archung was cited as disclosing the sensing and display of various parameters representative of control system status. While not conceding that Archung suggests what is alleged in the Office action, Archung nonetheless fails to make up for at least the above-noted deficiency of Quartararo with respect to the independent claims.

In view of the foregoing, reconsideration and withdrawal of the § 103 rejection is requested.

Conclusion

Based on the above, independent Claims 1, 11, 21, and 23 are patentable over the citations of record. The dependent claims are also deemed patentable for the reasons given above with respect to the independent claims and because each recite features which are patentable in its own right. Individual consideration of the dependent claims is respectfully solicited.

The other art of record is also not understood to disclose or suggest the inventive concept of the present invention as defined by the claims.

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Hence, Applicant submits that the present application is in condition for allowance. Favorable reconsideration and withdrawal of the objections and rejections set forth in the above-noted Office action, and an early Notice of Allowance are requested.

This Amendment Pursuant to 37 C.F.R. § 1.116 is an earnest attempt to advance prosecution and reduce the number of issues, and is believed to clearly place this application in condition for allowance. Accordingly, entry of this amendment is respectfully requested.

Moreover, entry and consideration of this amendment are proper under 37 C.F.R. § 1.116 for at least the following reasons. The amendment overcomes all of the rejections set forth in the above-noted Office action. The amendment does not raise new issues requiring further search or consideration. Additionally, the present amendment places the application in better form for appeal, which Applicant fully intends to pursue, if necessary. Therefore, entry and consideration of the present amendment are proper under 37 C.F.R. § 1.116 and are hereby requested.

If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the below-listed number.

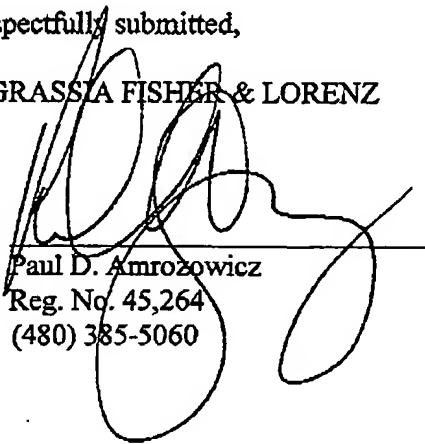
If for some reason Applicant has not paid a sufficient fee for this response, please consider this as authorization to charge Ingrassia, Fisher & Lorenz, Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

INGRASSIA FISHER & LORENZ

Dated: June 26, 2006

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